Site Location of Development
TECHNICAL REVIEW MEMORANDUM
Bureau of Land and Water Quality

TO: **Erle Townsend, Project Manager**
FROM: **David A. Waddell -- Division of Watershed Management**
DATE: **August 14, 2012**
RE: **Canton – Canton Mtn. Wind Power**

I have reviewed the additional information that was submitted by the applicant in response to my memo of 5/12/12. I have found that this response has addressed all of my concerns with this project at this time and that the project appears to meet the standards set forth in the Chapter 500 rules. I recommend approval of the project in its current form.

The following information has changed from my previous memo:

APPLICANT: Canton Mountain Wind LLC
DEP#: L-25557-24-A-N
Town: Canton
Engineer who prepared application: Engineering and Management Inc., Glauber deJesus, Bob Cummings
Parcel Size: 33.4 acres encumbered
Site Description: Woodland with steep slopes
Project description: 22 MW commercial windpower with 8 turbines and 10,600 feet of new access road.
Size of new impervious area: 4.6 acres
Size of new developed area: 5.3 acres
Watershed (waterbody): Ludden and Ridley Brook, Tributaries to the Androscoggin River
Watershed type: other

PLANS USED FOR REVIEW:
Watershed Plans: Figure 12-1, "Watershed Areas," dated 12/11 no revisions.
Water Quality Treatment: Plan Sheets C-300-33 through C-309-33, "Plan and Profile," dated 12/15/11, revised 6/13/12.
Erosion and Sediment Control Plans: Plan Sheets C-200-33 through C-213-33, "Plan and Profile," dated 12/15/11, revised 6/13/12.
Note: Other plans may have been reviewed that are not noted here.

STORMWATER MANAGEMENT

The applicant is proposing an industrial scale wind project capable of generating 22 megawatts of power from 8 turbine locations. This project lies within the watershed of tributaries to the Androscoggin River. Though encumbering 33.4 acres of land, the proposed project will create 5.3 acres of developed area and 4.6 acres of impervious area. As such the project triggers the Site Location of Development Act and must address the impacts under the "Stormwater Law'". This project must meet the Basic, General, and Flooding Standards. This project is being reviewed under the 2006 Stormwater Management rules and the design and sizing of the proposed BMPs for this project are based on the "Stormwater Management for Maine" January 2006.

Stormwater quality treatment and flooding mitigation will be achieved with numerous buffers and a grassed underdrained soil filter.

BASIC STANDARDS:

Note: *As always the applicant's erosion control plan is a good starting point for providing protection during construction. However, based on site and weather conditions during construction, additional erosion and sediment control measures may necessary to stop soil from leaving the site. In addition, other measures may be necessary for winter construction. All areas of instability and erosion must be repaired immediately during construction and need to be maintained until the site is fully stabilized or vegetation is established. Approval of this plan does not authorize discharges from the site.*

Approval recommended for this section.

GENERAL STANDARDS

Linear Portion
Percent of Impervious Treated: 77% (75% required)
Percent of Developed Treated: >67% (50% required)

Approval recommended for this section.

FLOODING STANDARDS
Linear projects create relatively little impervious area in any one sub-watershed and as such the applicant has looked at the impact on the wider watershed area. By looking at the impact on just the watershed's curve number (the first step in the typical TR20 or TR55 analysis) we can see the relative change in the watershed by flooding. This is also acceptable since the goal of the applicant has been to turn out or buffer as much of the road impacts as possible. This creates a large amount of disconnected impervious area, keeps flows from exiting the site in concentrated flow, and lengthens the flow path in a manner that will mitigate for local flooding impacts. The applicant has provided an analysis of the watersheds involved in this project for flooding. For this project the applicant has provided an analysis of the individual watershed and the percent of new impervious area compared to the watershed as a whole. This directly impacts the curve number of the watershed in a direct correlation. The analysis shows changes in the order of 0.02% or 1/100th of the curve number. This is well within model tolerances.

For the areas where road improvements may be impacting the 100 year floodway, the applicant has placed new impervious area on the opposite side of the existing road way from the impact. In those areas where the floodway is on both sides of the road, the applicant has proposed to minimize the impervious area while at the same time splitting the difference between both roadsides. The impacts appear to have been reduced to the smallest amount possible but I was unable to find an analysis of the flood elevations in these areas.

Approval recommended for this section.

MAINTENANCE:
NOTE: The applicant and contractor will be responsible for the maintenance of all proposed stormwater management structures, i.e. ponds, swales, culverts and discharge outlets during construction. Thereafter, each stormwater management structure should be cleaned and cleared of debris yearly at a minimum. Sweeping of all pavements is recommended on an annual basis. The DEP may request to inspect the site at a future date.

For this project, Canton Mountain Wind LLC / Andy Novey (857) 403-0119, shall be responsible for the long-term inspection and maintenance of the stormwater management system according to the plan provided by the applicant.

Approval recommended for this section.

DESIGN REVIEW RESPONSIBILITY

This review only ensures that the proposed plan is meeting the minimum standards set by the department for erosion control management and for stormwater management. It does not guarantee that the design is appropriate for the level of work suggested and for the functionality of the facility.